

REMARKS

I. Status of the Claims

Claims 1-55 are pending in this application. Applicant submits the above proposed amendment of Claims 1, 42, and 45 to further clarify the scope of the invention in light of the Office's suggestions. This proposed amendment does not constitute new matter. Support for the proposed amendment of claim 42 is found in the specification on page 1, lines 8-17. Support for the proposed amendment of claims 1 and 45 is presented on pages 24-29 of the Applicant's Response filed on February 13, 2001. This argument, providing support for amendment by proviso, is herein incorporated by reference. Applicant submits that introduction of the above proposed amendment would place the claims in condition for allowance, or reduce the number of issues for appeal. Accordingly, Applicant respectfully requests entry of the above amendment, reconsideration and reexamination of the application, and timely allowance of the pending claims.

II. Double Patenting Rejections

Claims 1-17 and 21-25 have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-46 of copending Application No. 09/349,436.

Claims 1-55 have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-23, 31, 54-82, 84-87, 90-107 of copending Application No. 09/350,579.

LAW OFFICES

FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, DC 20005
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Claims 1-21 and 25-55 have been provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 and 17-42 of copending Application No. 09/287,176.

Applicant maintains the traversal of all of these rejections, and respectfully requests that the rejections be held in abeyance until allowable subject matter is indicated in this application.

III. Objection for Improper Antecedent Basis

The specification has been objected to as failing to provide proper antecedent basis for the claimed subject matter. The Office asserts that the specification at page 1, lines 8-17, does not provide basis for the phrase "lightening direct dyeing" in claim 42. (Office Action, page 2.) Applicant traverses this objection by submitting that one skilled in the art would understand that the "direct dyeing" and "lightening dyeing" methods described in the specification at page 1, lines 8-17, could also be described as "lightening direct dyeing". However, in order to promote the timely prosecution of the application, Applicant has proposed amendment of claim 42 to recite "lightening dyeing with said at least one direct dye". Support for this amendment is found in the specification on page 1, lines 8-17. With entry of the above proposed amendment, Applicant submits that the Office's objection to claim 42 has been obviated. Applicant respectfully requests that the Office withdraw the objection to claim 42.

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FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, DC 20005
202-408-4000

IV. Rejection under 35 U.S.C. § 102(e)

The rejection of Claims 1-17, 25-29, 32-34, and 38-47 under 35 U.S.C. § 102(e) as being anticipated by *Rondeau et al.* (U.S. Pat. No. 6,001,135) has been maintained for reasons of record and additional reasons on page 3 of the final Office Action. The Office points to Example 2 of *Rondeau et al.*, alleging that it illustrates a composition comprising, in three parts, an oxidation base, a cationic direct dye of formula (I1), sawdust which comprises polymers containing a sugar unit as claimed (cellulose), and the oxidant hydrogen peroxide. See Office Action of September 13, 2000. Applicant respectfully traverses this rejection for the reasons of record, and as supplemented below.

A rejection under § 102 is only proper when the claimed subject matter is identically described or disclosed in the prior art. *In re Arkley*, 455 F.2d 586, 587 (CCPA 1972); see also M.P.E.P. § 706.02(a) ("For anticipation under 35 U.S.C. 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly."). In the present case, the Office has failed to show that the claimed subject matter as amended is identically described or disclosed in the prior art.

The Office alleges that sawdust comprises polymers containing a sugar unit as claimed, *i.e.*, cellulose. As argued in the Response filed February 13, 2001, Applicant submits that the sawdust in *Rondeau et al.* is not what is typically meant in the art by "thickening polymer." Rather, one of ordinary skill in the art would recognize that the sawdust of *Rondeau et al.* has a composition and physical organization that clearly differentiates it from a "thickening polymer". First, wood sawdust is composed of a

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FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
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heterogeneous mixture of both polymeric and non-polymeric components, specifically a mixture composed of 67-80% holocellulose and 17-30% lignin (a phenylpropane polymer), together with low percentages of resins, sugars, a variable amount of water, and potassium compounds.¹ Second, "sawdust" primarily comprises cell walls composed of polymeric components organized into a highly crosslinked and rigid macroscopic organization. Specifically, cellulose polymers in sawdust are organized into a framework of cellulose microfibrils that are crosslinked with a variety of components, including hemicelluloses, pectins, and lignin.² Applicant submits that this macroscopic chemical and structural organization of wood is not substantially altered when pieces of "sawdust" are mechanically produced from wood. Applicant also submits that one of ordinary skill in the art would not consider that the heterogeneous and macroscopic chemical and structural organization of "sawdust" wood is a "thickening polymer" as used in the art. Furthermore, the Applicant's own specification provides numerous examples of cellulose-based thickening polymers that do not read upon the crosslinked heterogeneous framework of cellulose and lignin that comprise sawdust. Clearly, one of ordinary skill in the art knows that the macroscopically organized and structurally crosslinked polymers in the remains of rigid plant cell walls that comprise "sawdust" are clearly distinguished from the polymers used in the art as "thickening polymers".

As evidence that "sawdust" is a thickening polymer of the claimed invention, the Office suggests "[t]ry adding large amounts of sawdust to water and see what results".

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FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N.W.
WASHINGTON, DC 20005
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¹ See Richard J. Lewis, Sr., *Hawley's Condensed Chemical Dictionary*, John Wiley & Sons, 1997.

² See definition of "Wood" in Jacqueline I. Kroschwitz, *Concise Encyclopedia of Polymer Science and Engineering*, John Wiley & Sons, 1990.

(Office Action, page 3.) Applicant submits that such a test would not indicate to the skilled artisan whether or not a particular substance would be useful as a "thickening polymer" in the present art. Whether a substance, when added to water, will appear to "thicken" the water is not relevant to classifying a substance as a "thickening polymer" in the present art. Many substances may appear to "thicken" water, yet such substances may not be useful as "thickening polymers" to the skilled artisan. Specifically, sawdust may appear to "thicken" water, however, sawdust is not known or used as a "thickening polymer" in the art of hair dyeing. Accordingly, Applicant submits that the sawdust disclosure in *Rondeau et al.* is not equivalent to a disclosure of using sawdust as at least one thickening polymer as defined in the present application.

In order to anticipate the claimed invention, the reference must teach every aspect of the claimed invention either explicitly or impliedly. M.P.E.P. § 706.02(a). In the present case, *Rondeau et al.* exemplifies a composition comprising at least one cationic direct dye according to the presently claimed invention. However, as discussed above, *Rondeau et al.* fails to exemplify at least one thickening polymer as defined in the present application. Therefore, because *Rondeau et al.* does not "identically describe or disclose" Applicant's invention, Applicant respectfully requests that the rejection under § 102(e) be withdrawn.

In addition, Applicant points out that the Office does not provide support for rejecting claims 25-26 because *Rondeau et al.* does not teach or suggest all of the limitations contained in these dependent claims. For example, *Rondeau et al.* does not

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FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, DC 20005
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disclose using a thickening polymer in an amount ranging from 0.01% to 10% by weight, relative to the total weight of the composition as is claimed in claim 25 or 26.

In addition to the arguments of record, and as supplemented above, Applicant also traverses the rejection of claims 45-47 directed to processes. The present invention concerns novel compositions for dyeing keratin fibers which are capable of giving more intense and yet unselective colorations which show good resistance to the various attacking factors to which the hair may be subjected, by combining at least one thickening polymer comprising at least one sugar with at least one known cationic direct dye. (Specification, page 2, line 19, through page 3, line 5.) *Rondeau et al.* does not disclose using a thickening polymer for processes that are capable of giving more intense and yet unselective colorations which show good resistance to the various attacking factors to which the hair may be subjected. Accordingly, the claimed processes of the present invention are clearly distinguished from the teachings of *Rondeau et al.* On this basis, the Applicant respectfully requests that the Office reconsider and withdraw the rejection of claims 45-47.

For the reasons of record, as supplemented above, Applicant submits that *Rondeau et al.* does not "identically describe or disclose" Applicant's invention, therefore, Applicant respectfully requests that the rejection of claim 1-55 under § 102(e) be withdrawn.

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FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, DC 20005
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V. Rejection under 35 U.S.C. § 103(a)

Rondeau et al.

Claims 1-55 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over *Rondeau et al.* for the reasons set forth on pages 3-4 of the present Office Action, and for the reasons set forth in the Office Action dated September 13, 2000. Applicant traverses this rejection for reasons of record, and as supplemented below.

To establish a *prima facie* case of obviousness, an Office must meet three basic criteria. First, he or she must demonstrate that there is some suggestion or motivation, either in the cited references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify a reference or combine reference teachings. Second, an Office must demonstrate that there was a reasonable expectation of success. Finally, the prior art reference(s) must also teach or suggest all the claim limitations. See M.P.E.P. § 2143. Furthermore, the teaching or suggestion to make the claimed combination must be found in the prior art, not in Applicants' disclosure. See *In re Vaeck*, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991).

In the present case, the Office has failed to make a *prima facie* case of obviousness because at least the first two of the above criteria have not been met.

The Office asserts that "[t]here is no motivation needed to substitute equivalents as long as the prior art recognizes the equivalence. Such equivalence is taught at column 23 lines 24-31" of *Rondeau et al.* (Office Action, page 4.) Applicant traverses this rejection by arguing that "organic pulverulent excipients" are not art recognized equivalents of "thickening polymers".

In order to rely on equivalence as a rationale supporting an obviousness rejection, the equivalency must be recognized in the prior art, and cannot be based on Applicants' disclosure or the mere fact that the components at issue are functional or mechanical

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FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, DC 20005
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equivalents. See *In re Ruff*, 356 F.2d 590, 118 U.S.P.Q. 340 (CCPA 1958) *Rondeau et al.*'s organic pulverulent excipient is just that, *i.e.*, "an inert substance used as a diluent or vehicle" (excipient³) "made of, covered with, or crumbling to fine powder or dust" (pulverulent²). The present invention concerns novel compositions for dyeing keratin fibers which are capable of giving more intense and yet unselective colorations which show good resistance to the various attacking factors to which the hair may be subjected, by combining at least one thickening polymer comprising at least one sugar with at least one known cationic direct dye. (Specification, page 2, line 19, through page 3, line 5.) *Rondeau et al.* does not disclose using a thickening polymer for giving more intense and yet unselective colorations which show good resistance to the various attacking factors to which the hair may be subjected. Accordingly, there is no reason why one of ordinary skill in the art would conclude that the excipients taught by *Rondeau et al.* at column 23, lines 24-31, are equivalent to the thickening polymers taught and claimed in the present application. Therefore, because no motivation exists to make the substitution suggested by the Office, the Applicant respectfully requests that the Office reconsider and withdraw the rejection.

Further, the Office has not responded to the Applicant's argument, filed February 13, 2001, that even if one did make the substitution suggested by the Office, there would have been no reasonable expectation of success. The present application teaches ready-to-use compositions comprising (1) at least one cationic direct dye chosen from compounds of formulae (I), (II), (III) and (III') and (2) at least one thickening polymer comprising at least one sugar unit. In contrast, *Rondeau et al.* teaches ready-to-use compositions comprising (1) at least one oxidation base, (2) at least one cationic direct dye, and (3) at least one oxidizing agent. Therefore, *Rondeau et al.* requires both at

³ *The American Heritage College Dictionary (Third Edition)*, Houghton Mifflin Company, Boston, 2000.

least one oxidation base and at least one oxidizing agent, neither of which are required by broad claim 1. Accordingly, one of ordinary skill in the art would not necessarily have expected success from substitution of a pulverulent excipient with a thickening agent of the present application in *Rondeau et al.* without including both at least one oxidation base and at least one oxidizing agent. To establish a *prima facie* case of obviousness, an Office must demonstrate that there was a reasonable expectation of success. See M.P.E.P. § 2143. The Office, in the present case, has not met this burden.

Also, the Office has not responded to the Applicant's argument, filed February 13, 2001, that the motivation to modify *Rondeau et al.* by adding at least one thickening polymer of the present application and removing two required ingredients (oxidation base and oxidizing agent) simply does not exist in the cited reference. Yet, the M.P.E.P. requires that the motivation to modify the disclosures of *Rondeau et al.* to obtain the claimed composition must come from the references themselves. See M.P.E.P. § 2143 (7th ed. 1st rev. 2000); *see also In re Dembiczak*, 175 F.3d 999, 50 USPQ2d 1614 (Fed. Cir. 1999). This has not occurred here.

Therefore, because the *Rondeau et al.* patent teaches the use of different chemical compounds to form a different product via a different method for a different purpose, one of ordinary skill in the art would not have been motivated to modify *Rondeau et al.* to obtain the present inventive compositions, nor would there have been a reasonable expectation of success in doing so. Accordingly, Applicant respectfully requests that the rejection be withdrawn.

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FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, DC 20005
202-408-4000

Kao Corporation

Claims 1-9, 12-17, 22-31, 42 and 44-47 remain rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kao Corporation* (EP 756,861). The Office asserts that "Kao's statements on page two indicate that the Guar gum has a known utility as a thickener in basic hair dye compositions and thus its use with any or all of the dyes in this application would have been obvious to the skilled artisan". (Office Action, page 6.) Applicant disagrees and traverses the rejection for reasons of record, and as supplemented below.

Kao Corporation at page 2, lines 12-14, teaches that hair dyeing compositions "frequently contain stabilizers with thickening effect, particularly cellulose derivative[s] such as hydroxyethyl cellulose. The stability and the dyeing effect achieved by the use of these compositions, however, are not satisfactory." *Kao Corporation* then specifically requires that its inventive composition contain a concentration "of at least one hydroxy-C2-C4-alkyl Guar gum and (or) of a quaternization product thereof." (*Id.*, lines 17-19.) Furthermore, *Kao Corporation* at page 4, lines 19-58, directly compares the inventive composition containing hydroxypropyl Guar or its quaternization products to compositions containing hydroxyethyl cellulose. "Replacing hydroxypropyl Guar or its quaternization products by the same amount of hydroxethyl cellulose led to products whose dye absorptive properties...were 20% to 25% lower than that of the compositions according to the invention." See *Id.*, lines 56-58. Clearly, *Kao Corporation* teaches hair dyeing compositions requiring very specific stabilizers with thickening effect, *i.e.*,

hydroxy-C2-C4-alkyl Guar gum and (or) of a quaternization product thereof. In contrast, Applicant's claimed compositions, useful for dyeing keratin fibers, comprise at least one compound chosen from a specifically-defined genus of cationic dye compounds and comprise at least one thickening polymer chosen from polymers comprising at least one sugar unit, including, for example, hydroxyalkyl celluloses. Accordingly, *Kao Corporation* teaches away from the Applicant's present invention, because one of ordinary skill in the art reading *Kao Corporation* would not have been motivated to combine the Applicant's specifically-defined genus of cationic dye compounds with at least one thickening polymer chosen from polymers comprising at least one sugar unit, including, for example, hydroxyalkyl cellulose.

The Federal Circuit has repeatedly recognized that an Applicant proceeding contrary to the accepted wisdom in the art represents "strong evidence of unobviousness." *In re Hedges*, 783 F.2d at 1041, 228 U.S.P.Q. at 687; *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d at 1552, 220 U.S.P.Q. at 312 (prior art teaching that conventional polypropylene should have reduced crystallinity before stretching and should undergo slow stretching, led away from claimed process of producing porous article by expanding highly crystalline PTFE by rapid stretching); accord *In re Fine*, 837 F.2d at 1074, 5 U.S.P.Q.2d at 1599. As discussed above, *Kao Corporation* teaches that a composition containing hydroxyethyl cellulose and a certain cationic dye results in products whose dye adsorptive properties were 20% to 25% lower than that of compositions according to the invention. Accordingly, the present Applicant proceeded contrary to the teachings of *Kao Corporation*, and subsequently invented compositions

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FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, DC 20005
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useful for dyeing keratin fibers comprising at least one cationic dye compound of a defined genus and at least one at least one thickening polymer chosen from polymers comprising at least one sugar unit, including, for example, hydroxyalkyl celluloses. Therefore, the disclosure in *Kao Corporation* actually supports the unobviousness of the present invention.

In addition, *Kao Corporation* at page 2, line 32, states "[o]n principle, all direct dyestuffs admitted for this purpose may be used as direct hair dyes". Applicant submits that the broad statement "on principle" is not based on actual examples, and indicates mere speculation. *Kao Corporation* then goes on to state at page 2, lines 35-36, "[p]referred dyestuffs are cationic (basic) dyes since their stability and absorptive properties are particularly enhanced by the addition of Guar gum derivatives according to the invention". However, *Kao Corporation* provides only three actual examples of compositions containing basic dyes, Basic Blue 99, Basic Red 76, or Basic Brown 17, as basis for this broad statement. Basic Blue 99, Basic Red 76, and Basic Brown 17 each contain a naphthalene group and no heterocyclic group, and this naphthalene group is the largest aromatic moiety within each of the dyes tested. None of the Applicant's cationic dye compounds contain a naphthalene group, while all contain a heterocyclic group. Further, results from three naphthalene-containing non-heterocyclic cationic dyes tested by *Kao Corporation* do not support the broad conclusion that all non-naphthalene-containing heterocyclic cationic dye compounds will result in the same hair dyeing properties. Clearly, as discussed above, the naphthalene-containing non-heterocyclic dye examples in *Kao Corporation* teach away from the Applicant's inventive non-

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& DUNNER, L.L.P.
1300 I STREET, N. W.
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naphthalene-containing heterocyclic dye compositions. Accordingly, the evidence of record indicates that one of ordinary skill in the art reading *Kao Corporation* would not have combined cationic dyes of the present invention and thickening polymers of the present invention in a composition for dyeing keratin fibers.

Furthermore, The Office addresses the Applicant's arguments, filed February 13, 2001, by stating that "[s]ince there is not [a] statement in the [Kao] reference or any other place in this file as to the structure of any of the specific dyes in Kao, the amendment does not begin to overcome the rejection." (Office Action, pages 5-6.) Applicant disagrees and traverses the rejection for reasons of record, and as supplemented below.

Kao Corporation at page 2, lines 39-56, lists 18 cationic dyes, including C.I.-Number. Applicant submits that one of ordinary skill in the art could routinely determine the structures of these dyes by referring to an appropriate handbook, such as, *The International Cosmetic Ingredient Dictionary and Handbook*, ed. J.A. Wenninger et al., Seventh Edition (1997). Convenience-copies of the relevant pages showing each of the eighteen cationic dyes listed in *Kao Corporation* are provided to the Office with this response. Review of these structures shows that the Applicant's present claims do not fall within the scope of *Kao Corporation's* disclosure. Furthermore, for reasons of record, *Kao Corporation* teaches away from using a composition for dyeing keratin fibers comprising the Applicant's cationic dyes and at least one thickening polymer, including, for example, hydroxalkyl cellulose.

Accordingly, because *Kao Corporation* fails to teach or suggest every element of the Applicant's invention as now claimed, the Office has not established a *prima facie*

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& DUNNER, L.L.P.
1300 I STREET, N. W.
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case of obviousness. Therefore, Applicant respectfully requests withdrawal of this rejection.

Lang

Claims 1-19, 25-31, and 42-47 remain rejected under 35 U.S.C. § 103(a) as being unpatentable over *Lang* (U.S. Pat. No. 3,985,499) for the reasons set forth in the Office Action dated September 13, 2000, and as supplemented on page 6 of the present Office Action. The Office previously acknowledged that *Lang*'s dyes differ from those presently claimed of formula (I) in that they comprise an extra substituent on the pyridine ring, and cites Examples 50 and 51. The Office also previously admitted that *Lang* does not exemplify a composition as claimed, particularly which contains both a polymer and dye as claimed, and further, that *Lang* does not teach the claimed dyeing methods wherein the oxidant is separately applied. The Office asserts "applicant's dye III, where m is zero and E is E1" is "a position isomer of the dye in *Lang*". (Office Action, page 6.) The Office states that "[I]t would have been obvious to the skilled artisan that the substitution of a dye which is a position isomer in the compositions of *Lang* would form a composition which would be expected to have similar properties". (*Id.*)

Applicant respectfully traverses this rejection. Nevertheless, in order to advance prosecution, Applicant submits a proposed amendment of Claims 1 and 45 to further define that the genus of cationic direct dyes which may be combined with hydroxyalkylcelluloses or carboxyalkylcelluloses does not include dyes of formula III that are positional isomers of the dye in *Lang*. Specifically, Applicant has amended Claims 1 and 45 such that when said at least one cationic direct dye is chosen from those of

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& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, DC 20005
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formula (I) wherein both D's represent nitrogen atoms, hence forming an azo bridge, and A is chosen from A₄ and A₁₃, or when said at least one cationic direct dye is chosen from those of formula (III) wherein both D₁ and D₂ each simultaneously represent nitrogen atoms, m is zero and E is chosen from E₁, E₂, and E₇, then said at least one thickening polymer may not be chosen from hydroxyalkylcelluloses and carboxyalkylcelluloses. By these amendments, Applicant is no longer claiming any compositions, or compositions comprising positionally isomeric dyes, within the scope of *Lang's* disclosure.

Accordingly, because *Lang* fails to teach or suggest every element of the Applicant's invention as now claimed, the Office has not established a *prima facie* case of obviousness. Therefore, Applicant respectfully requests withdrawal of this rejection.

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FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, DC 20005
202-408-4000

VI. Conclusion


In view of the foregoing remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this Amendment and charge any additional required fees to our deposit account, Deposit Account No. 06-0916.

Respectfully submitted,

**FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.**

By:


Charles D. Niebylski
Reg. No. 46,116

Dated: September 6, 2001

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FINNEGAN, HENDERSON,
FARABOW, GARRETT,
& DUNNER, L.L.P.
1300 I STREET, N. W.
WASHINGTON, DC 20005
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